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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,145	11/21/2001	Kazuhiko Nimura	P21429	9446

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EXAMINER

MAYO III, WILLIAM H

ART UNIT PAPER NUMBER

2831

DATE MAILED: 12/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,145

Examiner

William H. Mayo III

Applicant(s)

NIMURA, KAZUHIKO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional)
- a) ☐ The translation of the foreign language provisional application.
- 15) ☐ Acknowledgment is made of a claim for ____.

Attachment(s)

- ☐ Information Sheet (PTO-41) (Paper) (1/01)
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in present Application No. 09/989,145, filed on November 21, 2001.

Information Disclosure Statement

2. The information disclosure statement filed February 21, 2002 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 5 recites the limitation "said connecting pieces" in line 2, which is confusing and renders the claim indefinite. It is unclear whether the applicant is

referring to the same thing as previously mentioned to the previous mentioned term, then

he/she should recite the term with consistency. If the applicant is referring to new connecting pieces, then he/she should make the term more distinguishable.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4-13, and 15-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoyama et al (Pat Num 6,210, 223, herein referred to as Aoyama). Aoyama discloses a shielded connector assembly (Figs 1-5) for a female shielded terminal connectable to a shielded cable (Col 1, lines 9-11). Specifically, with respect to claim 1, Aoyama discloses an assembly (10b, Figs 1-5) comprising an internal terminal (20b) connectable to an inner conductor (51) of a shielded electrical wire (50), wherein the internal terminal (10b) includes at least one elastic connecting piece (denoted as 100 in Figs 3 & 5) to contact a corresponding male terminal (20a), and a dielectric (30b) mounted on an outer periphery of the internal terminal (20b) to insulate the internal terminal (20b) from an external terminal (40b) connected to an outer conductor (52) of the shielded electrical wire (50, Fig 1). With respect to claim 4, Aoyama discloses that the dielectric (30b) includes a hole (31) that extends from a forward end (left of 20b) + being positioned inside the hole (31, Fig 1). With respect to claim 5, Aoyama discloses

that the hole (31) is dimensioned to allow movement of the at least one connecting piece (100) toward and away from each other (Fig 5). With respect to claim 6, Aoyama discloses that the internal terminal (20b) further comprises a pair of thrusting pieces (23) which project from opposite sides of the internal terminal (20b) and dielectric (30b) further comprising a pair of pressure grooves (not numbered) extending along the sides of the hole (31) to receive the thrusting pieces (23, Col 4, lines 46-50, Fig 3). With respect to claim 7, Aoyama discloses that the assembly (10b) further comprises an external terminal (40b) covering the dielectric (30b) and the internal terminal (20b) therein (Fig 5), wherein the external terminal (40b) includes holding parts (denoted as 300) positioned at the front portion (left side) of the external terminal (40b) that receive a front end (left end) of the dielectric (30b, Fig 3 & 5). With respect to claim 8, Aoyama discloses that the dielectric (30b) is blocked shaped (Fig 1) and the holding parts (300) form a square for receiving the dielectric (30b, Fig 1). With respect to claim 9, Aoyama discloses that the external terminal (40b) further includes a covering wall part (outside wall portions of 40b) positioned rearward of holding parts (denoted as 300), wherein the covering wall (outside wall portions of 40b) includes an upper open face (located at 47) to receive a rear portion of the internal terminal (20b, Fig 1). With respect to claim 10, Aoyama discloses that the external terminal (40b) includes a barrel portion (46) positioned rearward of the covering wall part (outside wall portions) wherein the barrel portion (46) includes an open upper face (u shape of 46) to receive a net braid shield

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Aoyama discloses that the external terminal (40b) further includes a lance (42) on a lower face of the external terminal (40b) and extending toward a front portion of the external terminal (40b) and a dielectric (30b) further including a hooking groove (32) on a lower face of the dielectric (30b) and extending from a rearward to a forward direction of the dielectric (30b) to receive the lance (42) and secure the dielectric (30b) and the external terminal (40b) together (Fig 5). With respect to claim 12, Aoyama discloses a method of assembling a female shielded terminal (20b) comprising providing an internal terminal (20b) connectable to an inner conductor (51) of a shielded electrical wire (50), wherein the internal terminal (10b) includes at least one elastic connecting piece (denoted as 100 in Figs 3 & 5) to contact a corresponding male terminal (20a), mounting a dielectric (30b) on an outer periphery of the internal terminal (20b), after mounting the dielectric (30b) on the internal terminal (20b), connecting the inner conductor (51) of the shielded wire (50) to the internal terminal (20b), providing an external terminal (40b) on the dielectric (30b) and the internal terminal (20b), after mounting the external terminal on the dielectric (30b) and the internal terminal (20b), connecting the external terminal (40b) to the outer conductor (52) of the shielded electrical cable (50, Col 5, lines 38-56). With respect to claim 13, Aoyama discloses a method wherein the mounting of the dielectric (30b) includes covering the at least one connecting piece (100) with the dielectric (30b) so that damage to the at least one elastic connecting piece (100) is prevented (Fig 5). With respect to claim 15, Aoyama

comprising positioning the internal terminal (20b) inside the hole (31, Fig 1). With respect to claim 16, Aoyama discloses a method wherein the internal terminal (20b) further comprises a pair of thrusting pieces (23) which project from opposite sides of the internal terminal (20b) and dielectric (30b) comprising a pair of pressure grooves (not numbered) extending along the sides of the hole (31) to receive the thrusting pieces (23, Col 4, lines 46-50, Fig 3), further comprising positioning the thrusting pieces (23) inside the pressure groove (Fig 5). With respect to claim 17, Aoyama discloses a method wherein the assembly (10b) further comprises covering the dielectric (30b) and the internal terminal (20b) therein with an external terminal (40b), wherein the external terminal (40b) includes holding parts (denoted as 300) positioned at the front portion (left side) of the external terminal (40b) that receive a front end (left end) of the dielectric (30b, Fig 3 & 5). With respect to claim 18, Aoyama discloses a method wherein the dielectric (30b) is blocked shaped (Fig 1) and the holding parts (300) form a square for receiving the dielectric (30b, Fig 1), further comprising receiving the dielectric (30b) with the holding parts (denoted as 300) so that a forward end of the dielectric (30b) abuts the holding parts (300, Fig 3). With respect to claim 19, Aoyama discloses a method wherein the external terminal (40b) further includes a covering wall part (outside wall portions of 40b) positioned rearward of holding parts (denoted as 300), wherein the covering wall (outside wall portions of 40b) includes an upper open face (located at 47) to receive a rear portion of the internal terminal (20b, Fig 1), receiving a rear portion of

FIG. 3 is a perspective view of the assembly (10b) wherein the external terminal (40b)

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includes a barrel portion (46) positioned rearward of the covering wall part (outside wall portions) wherein the barrel portion (46) includes an open upper face (u shape of 46) to receive a net braid shield (52) of the shielded electric wire (50) and includes bendable portions (47) to cover the braided shield (52) of the shielded electrical cable (50, Fig 3) receiving the net braid shield (52) of the shielded cable (50) in the barrel portion (46, Fig 5) and bending the barrel portion (47) around the net braid shield (52) to cover the braided shield (52). With respect to claim 21, Aoyama discloses a method wherein the external terminal (40b) further includes a lance (42) on a lower face of the external terminal (40b) and extending toward a front portion of the external terminal (40b) and a dielectric (30b) further including a hooking groove (32) on a lower face of the dielectric (30b) and extending from a rearward to a forward direction of the dielectric (30b) to receive the lance (42) and secure the dielectric (30b) and the external terminal (40b) together (Fig 5), further comprising receiving the lance (42) in the hooking groove (32) thereby securing the dielectric (30b) and the external terminal (40b) together (Fig 5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

over Aoyama (Pat Num 6,210, 223) in view of Seko et al (Pat Num 5,951,336, herein

referred to as Seko). Aoyama discloses a shielded connector assembly (Figs 1-5) for a female shielded terminal connectable to a shielded cable (Col 1, lines 9-11).

Specifically, with respect to claim 2, Aoyama discloses at least one elastic connecting piece (100) comprising a pair of connecting pieces (left and right highlights) provided on the internal terminal (20b). With respect to claim 14, Aoyama discloses at least one elastic connecting piece (100) comprising a pair of connecting pieces (left and right highlights) provided on the internal terminal (20b).

However, Aoyama doesn't necessarily disclose the connecting piece being configured in an L-shape extending from respective facing wall of the internal terminal to a wall of the internal terminal provided between the facing walls, and each connecting piece of the pair of connecting pieces being cantilevered from the internal terminal so that the connecting pieces can elastically sandwich the corresponding male terminal therebetween (claim 2 & 14), nor the internal terminal having a slit between the connecting pieces that has a bent portion that extends toward each other (claim 3).

Seko teaches a female terminal assembly (Figs 1-9) that overcomes the difficulties of the prior art and aims to provide a terminal fitting wherein entry of foreign matter into the bending space is prevented (Col 1, lines 25-27). Specifically, with respect to claim 2, Seko teaches an internal terminal (A) comprising a connecting piece (12) being configured in an L-shape (Fig 3) extending from respective facing wall (at 14) of the internal terminal (A) to a wall of the internal terminal (A) provided between the

each being cantilevered from the internal terminal (A) so that the connecting pieces (12)

can elastically sandwich the corresponding male terminal therebetween (Col 2, lines 48-52). With respect to claim 3, Seko teaches an internal terminal (A) further comprising a slit (13) between the connecting pieces (12) and each said connecting piece (12) of the pair of connecting pieces (12) includes a bent portion (Fig 5) and extend toward each other (Fig 5). With respect to claim 14, Seko teaches method wherein an internal terminal (A) comprising a connecting piece (12) being configured in an L-shape (Fig 3) extending from respective facing wall (at 14) of the internal terminal (A) to a wall of the internal terminal (A) provided between the facing walls (at 14), and each connecting piece (12) of the pair of connecting pieces (12) being cantilevered from the internal terminal (A) so that the connecting pieces (12) can elastically sandwich the corresponding male terminal therebetween (Col 2, lines 48-52).

With respect to claims 2-3 and 14, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the internal terminal of Aoyama to comprise the internal terminal configuration as taught by Seko because Seko teaches that such a configuration overcomes the difficulties of the prior art and aims to provide a terminal fitting wherein entry of foreign matter into the bending space is prevented (Col 1, lines 25-27).

10. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama (Pat Num 6,210, 223) in view of Sato et al (Pat Num 5,171,166, herein referred to as Sato). Aoyama discloses a shielded connector assembly (Figs 1-5) for a female

As per claim 22, Aoyama discloses a method of assembling a female shielded

terminal (20b) comprising providing an internal terminal (20b) connectable to an inner conductor (51) of a shielded electrical wire (50), wherein the internal terminal (10b) includes at least one elastic connecting piece (denoted as 100 in Figs 3 & 5) to contact a corresponding male terminal (20a), mounting a dielectric (30b) on an outer periphery of the internal terminal (20b), providing an external terminal (40b) on the dielectric (30b) and the internal terminal (20b), connecting the inner conductor (51) of the shielded wire (50) to the internal terminal (20b), mounting the external terminal on the dielectric (30b) and the internal terminal (20b), after mounting the external terminal (40b) on the dielectric and the internal terminal (20b), connecting the external terminal (40b) to the outer conductor (52) of the shielded electrical cable (50, Col 5, lines 38-56).

However, Aoyama doesn't necessarily disclose simultaneously connecting the inner conductor of the shielded cable to the internal terminal and connecting the external terminal to the outer conductor of the shielded electric wire (claim 22).

Sato teaches an electrical connector (Figs 1-10) comprising a female terminal and a method of terminating the female terminal to a shielded cable having a good shielding effect and simple automation (Col 2, lines 15-17). Specifically, with respect to claim 22, Sato teaches a method of terminating a terminal (40, Figs 9-10) to a shielded cable (not numbered), wherein the termination of the inner terminal (56) to the inner conductor (55) of the shielded cable (Fig 9) and the connecting of the external terminal (50) is done by simultaneously providing crimping dies (61 & 63) which compress the

With respect to claim 22, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the method of terminating the shielded cable of Aoyama to comprise the method process as taught by Sato because Sato teaches that such a method of terminating a shielded cable provides good shielding effects and simplifies the difficult automation of the prior art, which uses two separate steps to terminate the inner and outer conductors, by terminating the inner and outer conductors by providing a single crimping step configuration (Col 1 & 2, lines 20-27 & 15-17).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Hashizawa et al (Pat Num 5,429,529), Aoyama et al (Pat Num 6,206,727), Bluemmel et al (Pat Num 6,059,616), Tanaka (Pat Num 6,039,605), Saito et al (Pat Num 6,372,990), Sato et al (Pat Num 5,133,677), Nakata et al (Pat Num 5,169,340), and Andic (Pat Num 4,269,469), all of which disclose electrical terminations having female terminals.

Communication

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703)

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read "William H. Miller III", is written over a circular stamp. The signature is stylized and cursive.

WHM III
December 10, 2002